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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/611,576

06/30/2003

Wayne L. Stockland

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EXAMINER

SAYALA, CHHAYA D

ART UNIT

PAPER NUMBER

1761

MAIL DATE

DELIVERY MODE

09/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/611,576

Applicant(s)

STOCKLAND, WAYNE L.

Examiner

C. SAYALA

Art Unit

1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/6/2007 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heitritter et al. (US Patent 5824355) in view of Lanter et al. (US Patent 5540932) and further in view of DE 19727107 taken with Thurman (US Patent 2970910) or Jenkins et al., (Journal of Animal Science, vol. 68:pages 460-466, Effects of Lecithin and Corn Oil on Site of Digestion, Ruminant Fermentation and Microbial Protein Synthesis in Sheep (1990))

Heitritter et al. show all the limitations except the addition of fat. Heitritter disclose a protein-protected ruminant feed comprising oil-seed meal, hulls, and water that has been cooked to give a cooked meal having a temperature of at least 200 °F and a moisture content of from 21 to 26 wt. % and thereafter drying and cooling the moist cooked feed to give a protein protected ruminant feed. The protein-protected ruminant feed is less digestible in the rumen and thereby enhances ruminant growth and milk production.

Lanter et al. teach that their "invention relates to extruded animal feed nuggets which function as a rumen escape composition and permit the release of beneficial nutrients in the abomasum or subsequent digestive tract. In one aspect, the invention relates to extruded animal feed nuggets suitable for consumption by ruminants. In another aspect, the invention relates to a method of making an extruded animal feed nugget using conventional extrusion equipment. In still another aspect, the invention relates to finished feed products of which the extruded animal feed nugget is a component. In a further aspect, this invention relates to a method of achieving the same level of milk and milk component yield in ruminants which are fed a lower crude protein diet than those which are fed a normal crude protein diet." (Col. 1)

Additionally, they disclose that "The animal feed nugget of this invention is a food supplement comprising a relatively homogeneous blend of at least one protein-containing ingredient and added fat. At least about 90 wt %, preferably at least about 93 wt %, and still more preferably at least about 96 wt % of the nugget is comprised of the protein-containing ingredient(s). The maximum amount of the protein-containing

Art Unit: 1761

ingredient(s) is typically not greater than 99 wt %. Protein sources include oil seed meals such as soybean meal and cottonseed meal; animal by-product meals such as meat meal, poultry meal, blood meal, feather meal and fish meal; plant by-product meals such as wheat middlings, soybean hulls and corn by-products; and microbial protein such as torula yeast and brewer's yeast. Soybean meal is the preferred protein source. The soybean meal can be solvent or expeller extracted, full or dehulled soybean meal.

The "added fat" of this invention includes liquid and soluble materials comprising edible mono-, di- and triglycerides of fatty acids and free fatty acids which are not inherently present in any other nonfat sources that may be present, e.g. the indigenous fat present in soybean meal, etc. Added fat includes both animal fat, e.g. beef tallow, bleachable fancy tallow, choice white grease, yellow grease, etc.; vegetable oil, e.g. soybean oil, palm oil, cottonseed oil, sunflower oil, corn oil, canola oil etc.; and combinations of any of these. The amount of added fat in the nugget is typically at least about 1.0 wt %, preferably at least about 3.0 wt %. The maximum amount of added fat in the nugget is typically not greater than about 6.0 wt %. (Col. 2).

The method includes adding fat to the protein before cooking it (col. 3, lines 25-30, 57-60). The protein disclosed includes soybean meal and the fat, soybean oil. Col. 2, lines 46 and 57. Maximum amount of fat added is 6 wt%. The mixture is subjected to cooking (in a conventional extruder, col. 3 and col. 4).

It would have been obvious to one of ordinary skill in the art to incorporate fat into the protein or oil seed meal by mixing in soybean oil, as taught by Lanter et al., for the

Art Unit: 1761

benefits taught by the patentees, as stated above. Furthermore, such incorporation would have been obvious since the inventions are both drawn to increasing nutrients to the abomasums, and increasing their milk production, and they both use similar ingredients made in a similar manner.

With regard to claim 12, the Lanter patent teaches using soybean oil but not the lecithin, although lecithin is contained within the oil, and the claim as recited does not exclude the oil. The DE patent teaches that use of lecithin as ruminant feed is advantageous in that it protects the feed from ruminal microorganisms. '910 discloses combining lecithin from vegetable oil refining as shown in the Figures, with meal to increase its nutritive value. See col. 1, lines 1-30, col. 2, lines 65+. Jenkins et al. noted that when soybean lecithin was used, "ruminal digestion was decreased by feeding fat supplements. In addition to supplying energy, added fat increased flow of dietary protein to the duodenum at the expense of ammonia lost from the rumen. However, this benefit was offset by decreased ruminal fiber and energy digestion and, unless there is sufficient hindgut compensation, could prove detrimental. Phospholipids inhibited ruminal fermentation similar to triglycerides, but they promoted increased fatty acid absorption from the hindgut. "

For these benefits, it would have been obvious to substitute the soybean oil with the phospholipids obtained from soybean oil.

Response to Arguments

Applicant's arguments filed 7/6/2007 have been fully considered but they are not persuasive.

At page 5 of his remarks with regard to claims 1-10, applicant states the differences between pending claim 1 and Heitritter are that:

1. Claim 1 is directed towards a "high energy ruminant feed and the reference is directed towards "a cooked protein protected ruminant feed" This is true. As one skilled in the art knows (see the Office Response in the Advisory Action), a "high energy ruminant feed" would include fat or carbohydrate, known energy sources. If Heitritter had disclosed the fat ingredient, this rejection would have been made under 35 USC 102. As for being "cooked", extrusion inherently cooks the feed.

2. Heitritter discloses about 30 to about 50 wt percent water, and pending claim1 recites 15 to about 50% by weight water. The overlap is obvious: 30-50%. Note too, the endpoint of the ranges that coincides: "50%".

3. At page 6, applicant states that the person of ordinary skill in the art would not combine Lanter with Heitritter because, in addition to moisture, patentee uses steam to increase the temperature and raise the moisture content; whereas the applicant does not mention steam.

In response, the instant claims recite a temperature of at least 200° F. This is *exactly* the temperature range at which water reaches its boiling point and more. Therefore, the

Art Unit: 1761

water of the claims would be converted to vapor as well. Furthermore, steam is not excluded in the pending claims, by the claimed water at the temperatures reached/used.

At page 7, applicant states that combining Lanter and Heitritter would be difficult:

“ Combining the method of Heitritter with the method of Lanter would be difficult, because the methods conflict. Applicants submit that the only way the methods can be combined to afford the currently claimed invention is via hindsight reconstruction. Combining the references would afford a method of 1) plasticizing the oil seed meal with hulls, the fat, sulfur (if present) and water, which includes steam, in an extruder - if Lanter is followed; or 2) mixing the oil seed meal with hulls and then adding the water and fat, if Heitritter is followed, thereby affording a combined feed solids mixture having a hull/oil seed meal weight ratio of either from about 1 : 100 to about 10:100 (if Heitritter is followed). Lanter does not discuss or otherwise mention the ratio of the hulls to the oil seed meal; Lanter merely states that 90 to 99 wt % of at least one protein-containing ingredient (such as soy bean meal) is present. See Col. 2, lines 1 to 49. “

The similarity is obvious. Sulfur is not excluded. There is no stipulation that Lanter must disclose the weight ratio of hulls to oil seed meal, as pointed out by applicant.

This is a rejection made under 35 USC 103, and the reference of Heitritter discloses all of the limitations except the fat, while Lanter discloses use of the fat, its benefit and the process is similar with similar ingredients. To rely on Heitritter for its disclosure of the ratio of hulls to oil seed meal would have been obvious and certainly not prohibited in a 35 USC 103 rejection, as applicant seems to think.

At page 7, second paragraph, applicant states that Lanter extrudes his ingredients at a temperature above 100 ° C and Heitritter cooks his composition at 200 ° C. It has been pointed out in previous actions that Heitritter does not use a temperature of 200 ° C.

Art Unit: 1761

Applicant is urged to point out by col. # and line # where this disclosure occurs. On the other hand, Heitritter shows a cooking temperature of **"at least 200 ° F"**.

Following is a conversion of 200 ° F to ° C for applicant's convenience: ° C = (200 ° F -32) X 5/9 = 93.3333° C.

Therefore, the temperature in Heitritter is "at least" 93°C. The similarity is obvious

Then applicant states that Lanter dries the extrudate to less than about 12 wt. % moisture; while Heitritter dries his from about 12 to 16 wt %. It is not clear how these ranges "conflict". " Less than *about* 12 wt %" clearly overlaps with "from about 12 to about 16 wt %". Furthermore, 1) this rejection is under 35 USC 103 and to adjust the drying conditions of an extrudate to obtain the required moisture content is within the skill of the artisan, 2) applicant must point out any authority, such as a statute, case law or rule, which stipulates that when 2 references are applied in a 35 USC 103 rejection, that they both show the same limitations as in the instant claims. The rejection already states that Heitritter shows all the limitations except fat. Then, the rejection has pointed out that Lanter teaches fat and its benefits in a similar process (not "same process"). And therefore, it would have been obvious modify the Heitritter process to include fat. If Heitritter and Lanter were the same in all of its disclosure, where would the need be to use them both?

Finally, at page 8, applicant states that Lanter's examples "teaches against the stated purpose of the Lanter application "[increasing] the release of beneficial

nutrients in the abomasums or subsequent digestive tract.” See Col. 2, lines 18-21. As a result, one of ordinary skill in the art, combining these references would expect to generate a feed that is even more digestible in the rumen and decreases rumen escape.” Applicant then points to the Examples B, E and F to illustrate that Lanter teaches “ that extruded feed containing fat has less ruminal escape than extruded feed without fat. “

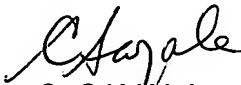
First, it is well known that an applied patent may be relied upon for all that it would have reasonably conveyed to one having ordinary skill in the art. Second, based on 35 USC 282, “A patent shall be presumed valid.” And finally, applicant’s attention is respectfully drawn to Feed Samples that show a higher ruminal escape than the extruded control, Feed A, that contains fat as compared to the control, C2, with no fat. Lanter shows Table 3 and Table 7 as comparisons between different extruders used. Since these examples cannot be compared to applicant’s method since the claims are not drawn to any particular extruder, the claims and benefits of adding fat to the Heitritter patent disclosure, relied on here, are sufficiently described by Example A.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Sayala whose telephone number is (571) 272-1405. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1761

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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